

[METHOD OF PREVENTING LEAKAGE CURRENT OF A METAL-OXIDE SEMICONDUCTOR TRANSISTOR]

Abstract of Disclosure

A gate oxide layer and a gate are sequentially formed on a substrate, and a source/drain extension is formed in the substrate thereafter. A liner layer is then formed to cover the substrate, and a first dielectric layer and a second dielectric layer are sequentially formed on the liner layer. By performing an etching process, a L-shaped spacer is formed on either side of the gate. Portions of the liner layer uncovered by the L-shaped spacer are then removed, and a step source/drain extension and a source/drain are simultaneously formed in the substrate thereafter. Finally, a salicide process is performed to form a silicide layer on the gate and on portions of the silicon substrate surface above the source/drain.

Figures